U.S. Environmental Protection Agency
Great Lakes National Program Office
Significant Activities Report

On the Web at:
www.epa.gov/glnpo

June 2002

IN THIS ISSUE:

Gary Gulezian, USEPA — Danny Epstein, Environment Canada

Great Lakes Binational Toxics Strategy Co-Chairs Address Stakeholder Forum

Mid-Point in Toxics Initiative

USEPA and Environment Canada held a 5-Year Great Lakes Binational Toxics Strategy Anniversary Stakeholder Forum and Dinner on May 29th in Windsor, Canada. Presentations at the Stakeholder Forum included a retrospective of Substance Workgroup accomplishments and progress toward the goals of the Strategy. In 1997, the U.S. and Canada signed the Strategy which commits to virtually eliminate the most troublesome persistent toxic substances entering the Great Lakes basin. These include chlordane, DDT, PCBs, mercury and dioxins as well as other toxic substances. These substances may have widespread, long-term adverse effects on fish and wildlife in the Great Lakes ecosystem.

Great Lakes Binational Toxics Strategy Display

Most of the challenge goals under the Strategy are expected to be met by 2006. Some examples of progress to date include the following: air emissions of mercury in the U.S. have declined by more than 40 percent between 1990 and 2001, at least 30 percent of PCB-containing transformers in use in 1994 have been safely disposed of, and, because of stronger pollution controls, there has been a 70 percent reduction in dioxin emissions since 1987.

A "mini" State of the Lakes Ecosystem was presented by USEPA and Environment Canada on the Strategy's "Level 1" substances concentrations in air, sediments, gull eggs and trout as well as air deposition trends in the Great Lakes Basin. Most of the trends in the environment show continued reductions in toxics concentrations, or in

some cases such as pesticides, a leveling off in concentrations.

Following the Stakeholder Forum, Environment Canada hosted a dinner for approximately 100 stakeholders to thank them for being partners with the United States and Canada in working toward the Strategy challenge goals. Keynote speakers included International Joint Commission Co-Chairs Herb Grey of Canada and Dennis Schornack of the United States. John Mills, Regional Director General of Environment Canada's Ontario Region hosted the dinner and spoke on behalf of Canada, while David Ullrich, Deputy Regional Administrator for USEPA Region 5 spoke on behalf of the United States.

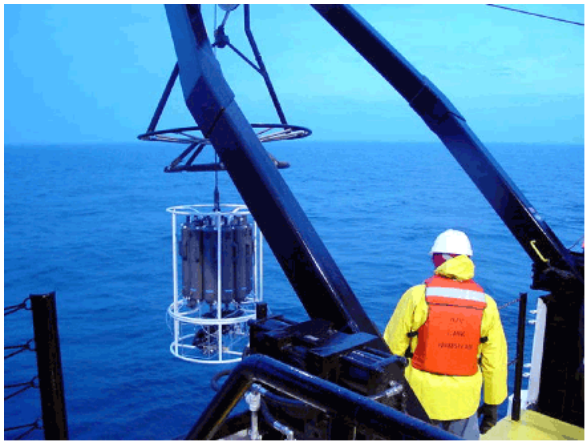
John Mills
Regional Director General
Ontario Region
Environment Canada
Welcomes Stakeholder
Dinner Participants

The 2001 Great Lakes Binational Toxics Strategy Annual Progress Report was distributed at the Stakeholder Forum. Approximately 150 copies of the report were distributed, along with 180 CDs containing the 2000 and 2001 Strategy Annual Progress Reports and related information. For more information about the Great Lake Binational Toxics Strategy or to obtain copies of the Report and CD, contact Ted Smith, 312-353-6571, smith.edwin@epa.gov; or E.Marie Phillips, 312-886-6034, phillips.emarie@epa.gov.

First Investigation of Lake Erie Dead Zone

On June 17th, scientists aboard the Great Lakes National Program Office's 180-foot research vessel, the *R/V Lake Guardian*, began an investigation of the increasing Lake Erie Dead Zone. This investigation, initiated and funded by GLNPO, will determine the causes of recent changes in Lake Erie.

Scientists from Case Western Reserve University, Pennsylvania State University and the U.S. Geological Survey began work on the project, departing from Cleveland, Ohio. Scientists collected samples and conducted experiments in Lake Erie's Central Basin, which has experienced the largest changes in the last several years.



Scientists Collect Water Samples Aboard
USEPA's Research Vessel, *R/V Lake Guardian*

In recent years, the "dead zone" in the Central Basin has expanded in size: this is an area where very little oxygen remains by late summer. This, plus an increase in phosphorus, without an increase in algae, is a puzzle to scientists dealing with Lake Erie. (See related stories in March 2002 and May 2002 Significant Activities Reports). (Contact: Glenn Warren, 312-886-2405, warren.glenn@epa.gov; David Rockwell, 312-353-1373, rockwell.david@epa.gov)

White Lake Cleanup Advances

Williams Environmental Services was awarded the contract by the Michigan De-

USEPA's *R/V Mudpuppy* Sampled White Lake in 1994 and 1996 to Determine Extent of Sediment Contamination

partment of Environmental Quality (MDEQ) to conduct the sediment cleanup project in the Tannery Bay portion of White Lake in Michigan. The site is located adjacent to an abandoned tannery and is heavily contaminated with chromium, arsenic and mercury. About 75,000 cubic yards of sediment are slated for removal. A public meeting was held on June 19th in Whitehall, Michigan to answer questions on the project and to address the public's concerns. Site preparation is scheduled to begin in late June and dredging should begin in mid-July. The total cost of the project is expected to be approximately $5 million, with the costs shared between Genesco, GLNPO, and Michigan's Clean Michigan Initiative funds. GLNPO awarded a grant to MDEQ for $500,000 in 1998 to help jump-start remedial activities at the site. (Contact: Marc Tuchman, 312-353-1369, tuchman.marc@epa.gov)

Grants Aid Wetlands

The Great Lakes National Program Office is analyzing 106 final grant reports from ecological protection and restoration projects funded by GLNPO and completed between 1992 and 2001. As part of the analysis, projects are being analyzed for environmental, stewardship, and economic results. The following is the analysis of funding for wetland projects from the report, "Mining Ideas II," which is expected to be completed shortly.

Sixteen projects out of 106 (15.1%) that were awarded and completed between 1992 and 2001 protected or began to restore more than 1,700 acres of wetlands. The total amount GLNPO awarded for the 16 projects was $1,438,335. The GLNPO funding leveraged another $4,060,959. Of the leveraged dollars, $3,400,000 were leveraged for one project, the Metzger Marsh National Wildlife Refuge on Lake Erie (also see related story in this issue). Of the grant and leveraged dollars, $624,702 went back into the community as contract dollars and $163,285 went for personnel costs.

Metzger Marsh Following Restoration

USEPA has limited regulatory responsibility for the nation's wetlands — the U.S. Army Corps of Engineers has primary responsibility. Nevertheless, the importance of wetlands for water quality, as well as fish and wildlife habitat, is well understood. For this reason and because of the great loss of wetlands, ranging from 60 to 90% across the Great Lakes States, GLNPO has put emphasis on funding wetland protection and

restoration projects.

A comprehensive ecological assessment of all natural quality coastal marshes of significant size in the U.S. portion of the Great Lakes was completed. The benefits of protection and restoration of more than 1,700 wetland acres include an increase in rare flora and fauna habitats, the establishment of a biological corridor between a refuge and a state park, and mitigation of agricultural runoff. A detailed inventory, assessment and evaluation of the types and functional values of coastal wetlands, altered wetlands, and other critical areas in approximately one million acres of Wisconsin's Lake Superior basin was conducted. Wetlands in the Bad River/Kakagon Watershed of Wisconsin were inventoried, assessed and stressors identified. Information about wetlands and management activities was shared with the public and this led to greater participation in project activities. Wetland monitoring provided information for several projects. Project activities included education and outreach.

Wild Rice Growing in Kakagon Slough, Wisconsin

As a result of the projects as well as reports from the State of the Great Lakes Ecosystem Conferences, GLNPO came to the conclusion that no unified monitoring and reporting system of the quantity and quality of Great Lakes coastal wetlands existed. To help remedy the situation, in Fiscal Years 2000 and 2001, GLNPO awarded $400,000 in a cooperative agreement to the Great Lakes Commission to pull together a consortium of scientists and natural resources managers to develop a practical long-term monitoring program. That work is underway and is expected to yield a monitoring program and a model for cooperation that could be used for inland wetlands or other ecosystem types. (Contact: Karen Rodriguez, 312-353-2690, rodriguez.karen@epa.gov; Mike Makdisi, 312312-353-1389, makdisi.mike@epa.gov)

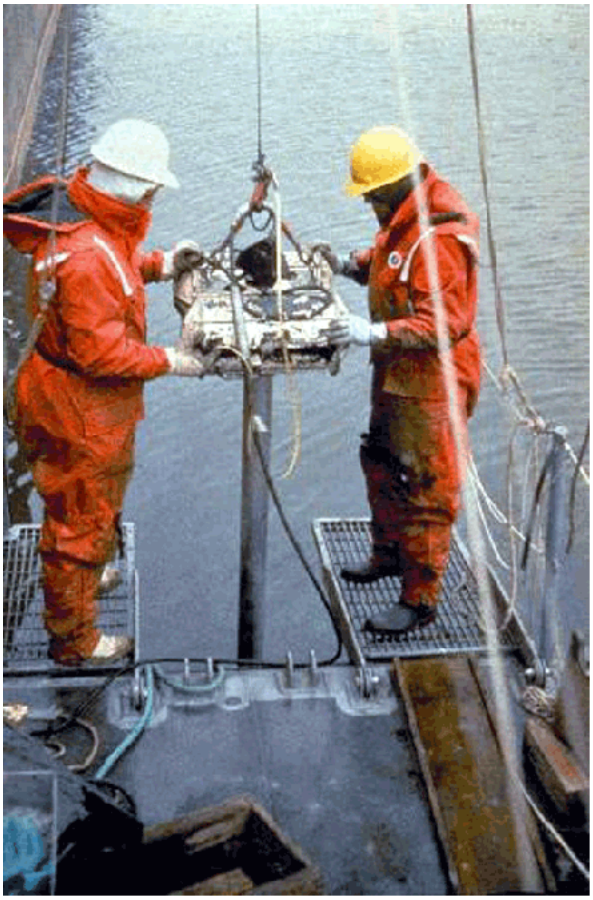
Wetland with Sedges

Ships Get Clean Bills of Health

At the end of May, a USEPA Headquarters health and safety audit team inspected the GLNPO research vessels, the *R/V Lake Guardian* and the *R/V Mudpuppy*. The auditors examined all parts of the vessels and all their safety systems (e.g. alarms, fire extinguishing). They reviewed documentation on the vessels' health and safety planning and records, and addressed the operating conditions aboard the vessels. The auditors passed both vessels with flying colors, concluding "no findings" regarding health and safety risks. The auditors concluded that GLNPO obviously "takes safety seriously." (Contact: Paul Horvatin, 312-353-3612, horvatin.paul@epa.gov)

Mudpuppy Probes Cuyahoga

During the week of May 13th, the *R/V Mudpuppy* collected samples on the Old River Channel of the Cuyahoga River in Ohio. The work was carried out as part of a grant given to the Ohio Environmental Protection Agency to perform a baseline assessment of this area. Limited sampling has been performed in the Old River Channel, outside of the navigation channel, and sediment cores have never been collected to show the historical sediment deposition. A total of eight sediment cores and approximately 25 ponar surface samples were collected and will be analyzed for a variety of contaminants, including PCBs, heavy metals, PAHs, and pesticides. This is the first time the *Mudpuppy* has visited the Cuyahoga River Area of Concern. (Contact: Demaree Collier, 312-886-0214, collier.demaree@epa.gov)



GLNPO Scientists Collect Sediment Core Sample Aboard *R/V Mudpuppy*

Great Lakes Scientists Speak

GLNPO's Scott Cieniawski presented a paper on the history and performance of Confined Disposal Facilities in the Great Lakes at "Dredging '02 - Third Specialty Conference on Dredging and Dredge Material Disposal" in Orlando, Florida. The conference, held May 5th to 8th, was hosted by the American Society of Civil Engineers. (Contact: Scott Cieniawski, 312-353-9184, cieniawski.scott@epa.gov).

Meanwhile, further north, in Winnipeg, Manitoba, several GLNPO scientists participated in the annual International Association for Great Lakes Research (IAGLR) conference from June 2nd to 6th. David Rockwell presented a talk on long-term (1983-2000) data from the Great Lakes National Program Office's annual water quality monitoring program, including the recent increases in total phosphorus in Lake Erie. Dr. Marc Tuchman presented a talk on the decline in populations of *Diporeia*, a bottom-dwelling organism that is a key part of the food-chain for several Great Lakes fish species. Dr. Tuchman also co-authored a talk given by Rick Barbiero on temporal changes in diatom communities in Lake Michigan. Other scientists attending the conference were very supportive of GLNPO's monitoring program and it's efforts to share its data with the scientific community and the public. Melissa Hulting chaired an informative session on Atmospheric Transport, Fate, and Deposition. In a lively session on Emerging Contaminants, Melissa Hulting and Ted Smith encouraged presenters to include available health effects

information when presenting ambient environmental data and to also provide data on other "new" contaminants to policymakers early on to keep them informed of developing trends.

A paper co-authored by GLNPO's Dr. Paul Bertram was awarded the prestigious Chandler-Misener Award at the conference. The Chandler-Misener Award is presented annually to the author(s) of the peer-reviewed paper in the current volume of the Journal of Great Lakes Research judged to be "most notable." The paper receiving this year's award was "Chemistry of the Offshore Surface Waters of Lake Erie: Pre- and Post-Dreissena Introduction (1983-1993)" by Joseph C. Makarewicz, Paul Bertram, and Theodore W. Lewis. It appeared in the Journal of Great Lakes Research, Volume 26, number 1, pages 82 to 93.
(Contact: Dave Rockwell, 312-353-1373, rockwell.david@epa.gov; Marc Tuchman 312-353-1369, tuchman.marc@epa.gov; Ted Smith, 312-353-6571, smith.edwin@epa.gov; Melissa Hulting, 312-886-2265, hulting.melissa@epa.gov; Paul Bertram, 312-353-0153, bertram.paul@epa.gov)

Marsh on Mend

GLNPO's Duane Heaton recently visited the Metzger Marsh at Ottawa National Wildlife Refuge near Toledo, Ohio. The marsh was originally protected by a barrier beach that eroded away due to hardening of the shoreline. In 1994, a dike was installed to protect the marsh from Lake Erie's waves. During dewatering of the marsh to promote restoration, about 6,000 native mussels of twenty-one species were temporarily removed, and a water-control structure was installed to restore the hydrologic connection with Lake Erie. Native mussels have virtually disappeared from Lake Erie due to the invasion

Dike System at Ottawa National Wildlife Refuge
(U.S. Fish and Wildlife Service Photo)

of zebra mussels. The presence of native mussels in Metzger Marsh offers hope that such marshes may serve as refuges for native mussel populations. The mussels were marked and measured before being returned to the marsh, and annual monitoring has indicated a high growth rate. They are also reproducing, based on the presence of young mussels. Larval forms of the mussels require a period of attachment to the gills of fish, although this has not been observed to date.

Fish coming into and going out of the marsh are caught in fish baskets, and length and species are recorded. On the morning of his visit, Duane observed white bass, bowfin, black crappie, quillback, bigmouth buffalo, gizzard shad, white perch, emerald shiner, spottail shiner, golden shiner, round goby, and a water snake in the baskets. The work is funded through an interagency agreement between GLNPO and the U.S. Geological Survey - Biological Resources Division.
(Contact: Duane Heaton, 312-886-6399, heaton.duane@epa.gov)

Great Lakes Watershed CD

GLNPO published a "Great Lakes Watershed" CDROM. The CD includes the Great Lakes Atlas, Facts about the Great Lakes

watershed, Images of the Great Lakes photo collection, and the Great Lakes Past and Future. The CD was originally produced as a handout for the American Meteorological Society's 31st Annual Conference on Broadcast Meteorology in Williamsburg, Virginia this month. The CD has proven very popular: half of the initial run of 1,000 copies were distributed within the first two weeks.

The Great Lakes Watershed CD

To obtain a copy, please contact Larry Brail at 312-886-7474, brail.lawrence@epa.gov; or Contact: Tony Kizlauskas, 312-353-8773, kizlauskas.anthony@epa.gov.

We welcome your questions, comments or suggestions about this month's Significant Activities Report. To be added to or removed from the Email distribution of the Significant Activities Report, please contact Tony Kizlauskas, 312-353-8773, kizlauskas.anthony@epa.gov.